

## Amendment and Response

Dkt. 7164.01

- F1* 66. (Amended) A method for the processing of an array comprising:  
(a) forming an array on a substrate, the array comprising a plurality of deposition domains formed of a deposition material at a pre-selected location;  
*F2* (b) exposing the array to one or more materials which contain an at least one target sample that causes a molecular interaction event with one or more of the deposition samples; and  
(c) scanning the array utilizing a scanning probe microscope to characterize the molecular interaction events that have occurred between the target samples and the deposition material.

- F3* 20 76. (Amended) An array for the identification of a target material comprising:  
a substrate including a substantially flat surface; and  
an at least one discrete deposition domain deposited on said surface, said deposition domain being smaller than one micron in total area and deposited at a pre-selected location on the surface, the deposition domain including a long chain biomolecular deposition material having the capacity to bind the target material.

- F4* 27 83. (Amended) An array of deposition domains for the detection of one or more pre-determined target materials comprising:  
a solid glass substrate including a substantially flat surface; and  
an at least one discrete domain deposited on the surface of the substrate, each domain being deposited at a known location and being smaller than one micron in area, each domain further including at least one type of molecule with a binding affinity for one or more of the target materials, at least two domains containing different biologically or chemically based molecules.

- F5* 30 89. (Amended) A molecular array for characterizing molecular interaction events, comprising:  
(a) a substrate; and  
(b) at least one molecular deposition domain on said substrate wherein the spatial address of the domain is less than one micron in area, each domain includes a biologically or

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chemically based molecule directly deposited on the substrate at a pre-selected location, at least two domains containing different biologically or chemically based molecules.

~~91.~~ (Amended) A molecular array for characterizing molecular interaction events,

comprising:

(a) a substrate; and

(b) at least one molecular deposition domain on said substrate wherein the spatial

address of the domain is less than one micron in area, each domain includes a biologically or chemically based molecule directly deposited on the substrate at a pre-selected location, and wherein the molecular deposition domain interacts with a molecular deposition probe having at least one microsphere attached thereto.

~~92.~~ (Amended) The array of claim ~~91~~ wherein the substrate includes a surface chosen from one or more of the group consisting of mica, glass, silicone, tetrafluoroethylene, polystyrene, polycarbonate, and polypropylene.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Marked-up Version Showing Changes."

**REMARKS**

Claims 56-63, 65-85, and 89-92 are pending.

Claims 56, 66, 76, 83, 89, 91, and 92 have been amended to more clearly define the novel aspects of the invention. Support for the amendments is cited below.

Applicant acknowledges the Examiner's withdrawal of claims 86-88.

Finally, Applicant thanks Examiner Fredman for his time and courtesy during the telephonic interview of April 11, 2002.

No new subject matter has been added.

Reconsideration of the pending claims is therefore respectfully requested in view of the amendments and the following comments.